Oil Field Environmental Incident Summary

Responsible Party: ENDURO OPERATING, LLC **Well Operator:** ENDURO OPERATING, LLC

Well Name: IVAN GEHRINGER 4

Field Name: MOHALL Well File #: 5378

Date Incident:8/9/2016Time Incident:17:30Facility ID Number:County:BOTTINEAUTwp:162Rng:83Sec:31Qtr:

Location Description:

Submitted By: Scott Hunskor Received By:

Contact Person: Scott Hunskor

777 MAIN STREET

SUITE 800

FORT WORTH, TX 76102

General Land Use: Cultivated Affected Medium: Topsoil

Distance Nearest Occupied Building:

Distance Nearest Water Well:

Type of Incident: Pipeline Leak

Release Contained in Dike: No Reported to NRC: No

Spilled Units Recovered Units Followup Units

Oil

Brine 200 Barrels 50 barrels

Other

Description of Other Released Contaminant:

Inspected: Written Report Received: 1/12/2017 Clean Up Concluded: 11/18/2016

Risk Evaluation:

none

Areal Extent: approx. 200' x 100'

Tuesday, January 31, 2017

Potential Environmental Impacts:

ground water

Action Taken or Planned:

Shut in well, notified state agencies (NDIC and NDDOH), start delineation, have clean up contractor on sight for sampling, mobilize excavators to haul off contaminated soil.

Wastes Disposal Location: Clean Harbors

Agencies Involved:

Updates

Date: 8/10/2016 Status: Inspection Author: Stockdill, Scott

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Arrived on location 14:15, 8/10/2016.

Spill surfaced 100 yards to the southwest of the Ivan Gehringer #4 injection shack. A mixture of a small amount of crude oil and saltwater surfaced, flowing to the east toward a shallow depression with wetland soils and vegetation present. The spill extended throughout the shallow depression wherever cattails were present.

The inspector used the conductivity meter to determine that the un-impacted areas ranged from 300 microsiemens (uS) to 900 uS, whereas the impacted soil areas ranged from 4.0 millisiemens (mS) on the outer edge to 30-40 mS in the lowest area where the water collected.

Water samples from shallow depression (120.4 mS) N.) 48.819136°

W.) -101.489758°

Background (1500 uS) N.) 48.819424° w.) -101.488192°

More follow-up is necessary.

Date: 8/11/2016 Status: Inspection Author: Stockdill, Scott

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Arrived on location 12:00, 8/11/2016.

Company contractor arrived and began to delineate the site. At the same time, the responsible party began excavation of the topsoil and daylighting the ruptured pipeline. The responsible party is going to fix the pipeline, flush it with freshwater and abandon the pipeline.

More follow-up is necessary.

Date: 8/11/2016 Status: Reviewed - Follow-up Required Author: Crowdus, Kory

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Release impacted areas off location. Follow-up is required.

Date: 8/12/2016 Status: Inspection Author: Stockdill, Scott

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Arrived on location 12:00, 8/12/2016.

Company has begun repairing the broken pipeline for the abandonment process and will continue work with excavation of impacted soils. There are still salts present in the unexcavated soils; however, there is no remaining visual evidence of crude oils.

More follow-up is necessary.

Date: 8/21/2016 Status: Inspection Author: Martin, Russell

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

8/21/2016 at 19:05, on location. Site appears similar to last inspection. Some excavation work has been done to the southwest of the wellhead; however, dying vegetation is visible to the east of the excavation, where vegetation transitions from grasses and thistles to cattails. Grasses and thistles are visibly brown and desiccated; however, cattails are only starting to brown. More follow-up required as cleanup continues.

Date: 8/22/2016 Status: Inspection Author: Nieraeth, Shawna

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Arrived on location at 10:15, 8/17/2016. No one found on site. Surface delineation of spill area has been done, and excavation has begun. Some soil conductivity readings on obviously affected areas read between 12-14 millisiemens (mS). It doesn't look as though temporary groundwater wells to collect samples have been installed. Follow-up required

Date: 8/29/2016 Status: Inspection Author: Stockdill, Scott

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Arrived on location at 3:30, 8/29/2016.

No sign of any more work being completed since the last inspection. Follow up with company to ensure work is being done at the location.

More follow-up is necessary.

Date: 9/9/2016 Status: Correspondence Author: Martin, Russell

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Phone call with responsible party. Electromagnetic scan completed over the past few weeks. Based on scan and consultation with the NDDoH, more excavation was completed this past week.

Date: 11/30/2016 Status: Correspondence Author: Martin, Russell

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Received map of Electrical Conductivity (EC) readings taken by consultant right before backfilling the site. Highest reading was 2.6 mS/cm.

Date: 12/6/2016 Status: Correspondence Author: Martin, Russell

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Corresponded by email with consultant. We discussed sampling two more spots in the excavated area, as well as plans for gathering data on potential impact in the wetland area.